

Gender and Power in Latin Narratives

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Introduction

In this project, we study differences in the portrayal of gender between two translations of the Latin narrative poem Metamorphoses by Ovid. Specifically, we leverage topic modeling to study the differences in topics associated with each gender, and we use connotation frames [1] to compute power and agency scores across genders and individual characters. We compare two English translations of the Latin poem: an older translation by Brookes More [2] and a more modern translation by



- 1. What is the distribution of power and agency among characters in the text? Are feminine characters described with more or less power than their masculine counterparts? What is the nature of the relationships among characters of different genders?
- 2. What kinds of topics are associated with characters in the text? How do these topics differ among gender groups?

Power Analysis: Gender-level

We used BookNLP [5] to perform gender inference and coreference resolution, and to extract subject-verb-object triples from the text. Then, we used [1] connotation frame lexicon to compute power and agency scores across each gender. We also computed a mean dominance score using the NRC-VAD lexicon [6].

gender	characters	power mean	agency mean	dominance mean		
he/him/his	594	0.579	0.983	0.504		
she/her	363	0.441	0.801	0.212		
they/them/their	397	0.164	0.355	0.097		
More translation (1922)						

gender	characters	power mean	agency mean	dominance mean
he/him/his	554	0.448	1.01	0.418
she/her	356	0.511	0.874	0.231
they/them/their	401	0.282	0.476	0.103

Kline translation (2000)

Topic Analysis

We leverage a <u>Python wrapper</u> for the topic modeling function of MALLET [4] to discover the topics associated with each gender group and character. We experimented with k=10 and removing common stopwords.

Topics	Top 5 keywords		
Family	father, mother, said, love, daughter		
Nature	earth, air, sky, fire, light		
Ocean	sea, waters, waves, nymphs, river		
Kingdom and war	son, city, king, war, father		
Hunting	wild, field, fierce, birds, cattle		

Table: Most prominent topics in the text (more masculine topics are highlighted in

blue, more feminine topics are highlighted in orange)

Power Analysis: Individual-Level

As a case study, we examined the power and agency of individual characters from a single story within the larger text. We chose the story of Tereus and Philomela and used BookNLP to perform coreference resolution and extract SVO triples for each character.

As expected, Philomela and Itys have very little power in both translations. Tereus, like Procne, has similar agency but increased power in the Kline translation. This could be a result of Kline not "sugarcoating" his translation. Kline actually uses the verb "rape" where More uses "seize."



Mean power score per character

Feminine characters are more likely to be associated with the topics of family and nature, while masculine characters are associated with topics related to hunting, war, and ocean explorations.

Limitations/Future work

- Coreference resolution in BookNLP was too noisy to perform fine-grained analysis.
- Power and agency scores can be influenced by wording and syntax changes across translations
 - BookNLP only tracks finite verbs for each character, but one translation may use a non-finite verb where the other uses a finite one, meaning that the non-finite verb is not used in our power or agency score
 - We need to use a dependency parser separate from BookNLP's to identify these cases.



We also divided the text into four main segments and computed power and agency scores for each character within each section. Tereus and Procne are more powerful in the modern Kline translation, but Philomela is generally less powerful (in the last three segments).



[1] Sap, M., Prasettio, M. C., Holtzman, A., Rashkin, H., and Choi, Y. (2017). Connotation frames of power and agency in modern films. In Proceedings of the 2017 Conference on Empirical Methods in Natural Language Processing pages 2329–2334, Copenhagen, Denmark. Association for Computational Linguistics.

[2] Ovid. The Metamorphoses. Translated by Brookes More.

1922.<u>http://data.perseus.org/citations/urn:cts:latinLit:phi0959.phi006.perseus-eng1:1.253-1.347</u>

[3] Ovid. The Metamorphoses. Translated by A. S. Kline. Gleeditions, 17 Apr. 2011, www.gleeditions.com/metamorphoses/students/toc.asp?lid=108. Originally published on Poetry in *Translation*, 2000, <u>www.poetryintranslation.com/PITBR/Latin/Ovhome.htm</u>.

[4] McCallum, Andrew Kachites. "MALLET: A Machine Learning for Language Toolkit." http://mallet.cs.umass.edu. 2002.

[5] Bamman, D., Underwood, T., and Smith, N. A. (2014). A Bayesian mixed effects model of literary character. In Proceedings of the 52nd Annual Meeting of the Association for Computational Linguistics (Volume 1: Long Papers), pages 370–379, Baltimore, Maryland. Association for Computational Linguistics.

[6] Mohammad, S. M. (2018). Obtaining reliable human ratings of valence, arousal, and dominance for 20,000 english words. In Proceedings of The Annual Conference of the Association for Computational Linguistics (ACL), Melbourne, Australia.